UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/385,020 | 08/30/1999 | SHUNPEI YAMAZAKI | 0756-2023 | 8609 |

31780 7590 01/09/2004

ERIC ROBINSON
PMB 955
21010 SOUTHBANK ST.
POTOMAC FALLS, VA 20165

| EXAMINER | |
|---|---|
| NGUYEN, KEVIN M | |
| **ART UNIT** | **PAPER NUMBER** |
| 2674 | 24 |

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/385,020 | YAMAZAKI, SHUNPEI | |
| | Examiner | Art Unit | |
| | Kevin M. Nguyen | 2674 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 October 2003*.

2a)☒ This action is **FINAL**. 2b)■ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *7-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1. The amendment filed on 10/07/2003 is entered. The rejections of claims 7-26 are maintained.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 7, 9-14 and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evanicky et al (US 5,896,119) in view of Maruyama (JP 08 211361).

As to claims 7, 11 and 23, Evanicky et al teach an active matrix liquid crystal display panel which includes a reflector 120 (col. 11, line 60), a back supporting glass 415a, and active transistor layer 417 having a plurality thin film transistors and a plurality of pixel electrodes, an active matrix substrate, a front supporting glass layer 415b (a counter substrate) (figure 9A, col. 12, lines 2-5); *a power supply (537) (a battery, figure 10, column 14, line 25);*

Evanicky et al fail to teach "3-color light emitting diodes for producing three primary colors for additive color mixing." However, Maruyama teaches a liquid crystal display device having three light emitting diode elements 15r, 15g, and 15b of red, green, and blue become 3 set at a time by one piece, respectively (see figures 1 and 3a, page 2, paragraph [0014] of detailed description). It would have been obvious to a

person of ordinary skill in the art at the time of the invention to utilize the RGB-LED elements 15R, 15B, 15G taught by Maruyama in Evanicky et al's TFT-LCD device because this would be miniaturized thinly, the uniform luminescence quantity of light can be obtained, and long lasting display can be obtained, without producing the shortage of an illuminance (see page 4, paragraph [0024] of detailed description).

As to claim 19, Evanicky et al teach an active matrix liquid crystal display panel which includes a reflector 120 (col. 11, line 60), a back supporting glass 415a, and active transistor layer 417 having a plurality thin film transistors and a plurality of pixel electrodes, an active matrix substrate, a front supporting glass layer 415b (a counter substrate) (figure 9A, col. 12, lines 2-5), two backlights 52 are arranged on sides of the active matrix display panel 20 in opposite to each other; *a power supply (537) (a battery, figure 10, column 14, line 25);*

Evanicky et al fail to teach "3-color light emitting diodes for producing three primary colors for additive color mixing *comprising a plurality of light emitting diode lamps arranged in line.*" However, Maruyama teaches a liquid crystal display device having three light emitting diode elements 15r, 15g, and 15b of red, green, and blue become 3 set at a time by one piece, respectively (see figures 1 and 3a, page 2, paragraph [0014] of detailed description); *a plurality of light emitting diode lamps arranged in line (you may arranged RGB-LED in other configuration, page 4, paragraph [0021]).* It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the RGB-LED elements 15R, 15B, 15G taught by Maruyama in Evanicky et al's TFT-LCD device because this would be miniaturized thinly, the uniform

luminescence quantity of light can be obtained, and long lasting display can be obtained, without producing the shortage of an illuminance (see page 4, paragraph [0024] of detailed description).

As to claims 10, 12, 20 and 24, Evanicky et al teach a refection type liquid crystal display panel including the light beam being reflected (see figure 9A).

As to claims 13, 21 and 25, Evanicky et al teach an active transistor layer 417 having a plurality thin film transistors and a plurality of pixel electrodes, an active matrix substrate, a front supporting glass layer 415b (a counter substrate) (figure 9A, col. 12, lines 2-5).

As to claims 9, 14, 22 and 26, Maruyama's invention is applied to the display used for a notebook size personal computer (see page 1, paragraph [0001] of detailed description).

4. Claim 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evanicky et al in view of Okajima et al (US 5,334,993).

As to claim 15, Evanicky et al teaches an active matrix liquid crystal display panel which includes a reflector 120 (col. 11, line 60), a back supporting glass 415a, and active transistor layer 417 having a plurality thin film transistors and a plurality of pixel electrodes, an active matrix substrate, a front supporting glass layer 415b (a counter substrate) (figure 9A, col. 12, lines 2-5); *a power supply (537) (a battery, figure 10, column 14, line 25).* Referring to figure 10, two backlights 52 are arranged on sides of the active matrix display panel 20 in opposite to each other.

Evanicky et al fail to teach "a red LED, a blue LED, and a green LED located on a substrate and coated with resin." However, Okajima et al teaches a LCD having a backlight 111, the light guide plate 13 is made of a flat plate-shaped acrylic resin (see col. 2, lines 4344). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the flat plate-shaped acrylic resin taught by Okajima et al in Evanicky et al's back light sources because this would prevent transmission heat emitting from a light source to a LCD plate and improve the display quality image (col. 1, lines 42-45 of Okajima).

As to claim 16, Evanicky et al teach a refection type liquid crystal display panel including the light beam 62a being reflected (see figure 9A).

As to claim 17, Evanicky et al teach an active transistor layer 417 having a plurality thin film transistors and a plurality of pixel electrodes, an active matrix substrate, a front supporting glass layer 415b (a counter substrate) (figure 9A, col. 12, lines 2-5).

5. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evanicky et al in view of Maruyama, and further in view of Zhou (US 5,953,469).

As to claims 8 and 18, Evanicky et al and Maruyama teach all of the claimed limitations of claims 7 and 15, except for the counter substrate has a plurality of inclined surface on a back of the counter substrate. However, Zhou teaches the counter substrate 20 having a plurality of inclined surface 31 on a back of the counter substrate 20 (see figure 3). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the counter substrate 20 having a plurality of inclined

surface 31 on a back of the counter substrate 20 taught by Zhou in Maruyama's LCD device because this would improve the formation of video images of good quality, high resolution, and low power consumption (col. 3, lines 41-45 of Zhou).

***Response to Arguments***

6. Applicant's arguments filed 10/07/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the RGB-LED elements 15R, 15B, 15G taught by Maruyama in Evanicky et al's TFT-LCD device because this would be miniaturized thinly, the uniform luminescence quantity of light can be obtained, and long lasting display can be obtained, without producing the shortage of an illuminance (see page 4, paragraph [0024] of detailed description).

In response to applicant's argument that claims 11, 15, 19 and 23 recites "a battery." This argument is not persuasive because Evanicky et al's invention teaches a power supply (537) (a battery, figure 10, column 14, line 25).

For these reasons, the rejections based on Evanicky et al have been maintained.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
December 29, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600